

17 MAR 1933

No 3717

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(For London Office only.)

Rpt. C.11.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~
having Poop, Bridge and Forecastle

(Type of Superstructures.)

| | | | | |
|--------------------------------|---|--------------------------------|------------------------------|---------------------------------|
| Ship's Name ATLANTEN | Nationality and Port of Registry Swedish Sölvesborg | Official Number 7782 | Gross Tonnage 3492 | Date of Build 1902 3. |
|--------------------------------|---|--------------------------------|------------------------------|---------------------------------|

Port of Survey Stockholm
Date of Survey March 9th 1933.
Name of Surveyor Ch. Knowles

Moulded Dimensions: Length 340.5 Breadth 25.66 Depth 26.08
Moulded displacement at moulded draught = 85 per cent. of moulded depth
Coefficient of fineness for use with Tables 820

Particulars of Classification 100A1.
2nd 2nd 11-26.
116g, 141. 31.

| | | |
|--|---|---|
| <p>Depth for Freeboard (D) <u>26.08</u></p> <p>Moulded depth ... <u>26.08</u></p> <p>Stringer plate ... <u>0.55</u></p> <p>Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ <u>0.05</u></p> <p>Depth for Freeboard (D) = <u>26.13</u></p> | <p>Depth correction</p> <p>(a) Where D is greater than Table depth (D - Table depth) R = <u>(26.13 - 22.70) 2.619 = + 8.98</u></p> <p>(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>3.43</u></p> <p>If restricted by superstructures</p> | <p>Round of Beam correction</p> <p>Moulded Breadth (B) <u>25.66</u></p> <p>Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>11.36</u></p> <p>Ship's Round of Beam = <u>11.36</u></p> <p>Difference <u>0.14</u></p> <p>Restricted to</p> <p>Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) =$ <u>$\frac{.14^2}{4} \times .5617 = -.02$</u></p> |
|--|---|---|

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) | |
|-------------------------|-------------------------|--|-------------|-------------------|----------------------|---|
| Poop enclosed ... | <u>26</u> | <u>26.00</u> | <u>7'0"</u> | | <u>26.00</u> | Standard Height of Superstructure <u>6.905</u> |
| " overhang ... | | | | | | " " R.Q.D. |
| R.Q.D. enclosed ... | | | | | | Deduction for complete superstructure <u>38.03</u> |
| " overhang ... | <u>85.57</u> | <u>85.57</u> | <u>7'6"</u> | | <u>85.57</u> | Percentage covered $\frac{S}{L} =$ <u>43.83</u> |
| Bridge enclosed... | <u>86.25</u> | <u>86.25</u> | <u>7'6"</u> | | <u>86.25</u> | " $\frac{S_1}{L} =$ <u>43.35</u> |
| " overhang aft ... | <u>68</u> | <u>51</u> | | | <u>51</u> | " $\frac{E}{L} =$ <u>43.35</u> |
| " overhang forward | | | | | | Percentage from Table, Line A. |
| Fore enclosed ... | <u>37</u> | <u>35.52</u> | <u>7'3"</u> | | <u>35.52</u> | (corrected for absence of forecastle (if required)) |
| " overhang ... | | | | | | Percentage from Table, Line B. |
| Trunk aft ... | | | | | | (corrected for absence of forecastle (if required)) |
| " forward ... | | | | | | Interpolation for bridge less than 2L (if required) |
| Tonnage opening aft ... | | | | | | Deduction = <u>11.54</u> |
| " forward | | | | | | |
| Total ... | <u>149.25</u> | <u>147.60</u> | | | <u>147.60</u> | |

SHEER CORRECTION.

| Station | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product | |
|---------------------|-------------------|----------|---|---------------|-----------------|--------------------|----------|---|---------------|---|
| A.P. ... | <u>44.05</u> | <u>1</u> | | <u>44.05</u> | <u>46.00</u> | <u>46.00</u> | <u>1</u> | | <u>46.00</u> | Mean actual sheer aft = <u>Excess</u> |
| 1/4 L from A.P. ... | <u>19.60</u> | <u>4</u> | | <u>78.40</u> | <u>19.75</u> | <u>19.75</u> | <u>4</u> | | <u>79.00</u> | Mean actual sheer forward = <u>Excess</u> |
| 1/2 L " ... | <u>4.84</u> | <u>2</u> | | <u>9.68</u> | <u>4.94</u> | <u>4.94</u> | <u>2</u> | | <u>9.88</u> | Length of enclosed superstructure forward of amidships = <u>7.1</u> |
| Amidships ... | | <u>4</u> | | <u>0</u> | | | <u>4</u> | | | " aft of " = <u>7.1</u> |
| 3/4 L from F.P. ... | <u>4.69</u> | <u>2</u> | | <u>9.38</u> | <u>10.17</u> | <u>10.17</u> | <u>2</u> | | <u>20.34</u> | |
| 1/4 L " ... | <u>39.20</u> | <u>4</u> | | <u>156.80</u> | <u>40.68</u> | <u>40.68</u> | <u>4</u> | | <u>162.72</u> | |
| F.P. ... | <u>88.10</u> | <u>1</u> | | <u>88.10</u> | <u>92.5</u> | <u>92.5</u> | <u>1</u> | | <u>92.50</u> | |
| Total ... | | | | <u>396.41</u> | | | | | <u>410.44</u> | |

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) =$ $\frac{396.41}{18} \left(\frac{75-2191}{5309} \right) = -.41$

If limited on account of midship superstructure. If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 26.13

Summer freeboard = 4.70

Moulded draught (d) = 21.43

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 5.36 = 136

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$

Tons per inch immersion at summer load water line

T =

Deduction = $\frac{\Delta}{40 T}$ inches

TABULAR FREEBOARD corrected for Fresh Deck (if required)

Correction for coefficient

$\frac{820 + .68}{1.36} = \frac{1.50}{1.36}$

Depth Correction ... 8.98

Deduction for superstructures ... 11.54

Sheer correction41

Round of Beam correction02

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc. ...

8.98 11.97 - 2.99

Summer Freeboard = 56.39

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc ...

Fresh Water Line " " ...

Tropical Line " " ...

Winter Line below " " ... 136

Winter North Atlantic Line " " ...

Tropical Fresh Water Freeboard ...

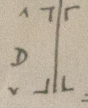

Fresh Water " " ...

Tropical " " ...

Winter " " ...

Winter North Atlantic " " ...

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

| HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS | | | | | | | | | |
|--|---|--|-------------|---------------|--------------|---------------|--|--|--|
| | | ← Bridge Deck → | | → Boat SK. → | | | | | |
| Description of Hatchway | | 1 + 4 | 2 + 3 | Cross Bunkers | Side Bunkers | Saddlebunk | | | |
| Dimensions of Hatchway | | 20'3" x 14'2" | 24' x 14'2" | 11' x 3'6" | 8' x 3' | 13'10" x 5'6" | | | |
| COAMINGS | Height above Deck | 2'8" | 2'8" | 2'3" | 9" | 3" | | | |
| | Thickness | .36" | .36" | .36" | 9' x 3' B.A. | 1'24" | | | |
| | Sides Ends | .32" | .32" | | | | | | |
| | Stiffeners | - | - | - | - | - | | | |
| | Brackets, Stays | - | - | - | - | - | | | |
| STEEL HATCH BEAMS | Number | 1 | 2 | | | | | | |
| | Spacing | centre | 8'-2" | | | | | | |
| | Scantling and Sketch | 3" x 3" angles. D = 33" | | | | | | | |
| |  | | | | | | | | |
| | Bearing Surface | 7" | 7" | | | | | | |
| WOOD FORE AND AFTERS | Number | 3 | 3 | | | | | | |
| | Spacing | 42" | 42" | | | | | | |
| | Unsupported Lengths | | | | | | | | |
| | Scantling* and Sketch | 4' 5" x 7" 4' 8" x 6" 5' 6" x 6" 5' 5" x 6" | | | | | | | |
| |  | | | | | | | | |
| Bearing Surface | 2" | 2" | | | | | | | |
| HATCH COVERS | Material | Wood | | Wood | Wood | Wood | | | |
| | Thickness | 2 1/2" | | 2 1/2" | 2 1/2" | 2 1/2" | | | |
| | How fitted | Thru. | | F. & A. | Thru. | F. & A. | | | |
| | Bearing Surface | 2" | | 1 1/2" | 2" | 2 1/2" | | | |
| Spacing of Cleats | | 24" | | 28" | 25" | 28" | | | |
| Number of Tarpaulins | | 2 | | 2 | 2 | 2 | | | |
| *Are wood fore and afters steel shod at all bearing surfaces? <i>yes.</i> | | | | | | | | | |
| Are battens and wedges efficient and in good condition? <i>yes.</i> | | | | | | | | | |
| Are tarpaulins in good condition and in accordance with rule requirements? <i>yes.</i> | | | | | | | | | |
| Are lashings provided in accordance with rule requirements? <i>yes.</i> | | | | | | | | | |

Particulars of fiddle, funnel and ventilator coamings:—

Fiddle openings covered by strong steel covers. } All on top of a casing 7'-0" high
Funnel ventilators in good condition. } standing on bridge deck.

Particulars of Flush Bunker Scuttles:— None.

Particulars of Companionways:—

Steel deckhouse on Poop. 1 steel hinged door at aft end, 23' x 59". Sill 15".
Handle operable from both sides, leading to crew space.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—

8 @ 14" x 38" x 28". Wood plugs & tarpaulins provided for closing.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—

All fitted flush to deck, with brass screw plugs.

Particulars of Gangway Cargo and Couling Ports:—

None.

Particulars of Scuppers and Sanitary Discharge Pipes:—

Sanitary discharge pipes led overboard above freeboard deck.
Storm valves fitted.

Particulars of Side Scuttles:—

All above freeboard deck. Efficient deadlights fitted.

Particulars of Guard Rails:—

Feet: Poop. 39' high. Stanchions spaced 50" apart, having 3 rails
rose thro' same.

Particulars of Gangways, Lifelines, etc.:—

Lifelines arranged along aft well deck as convenient.
brw verched aft.

RETAIN

| Particulars of Freeing Arrangements. | | | | | | |
|--------------------------------------|-------------------|-------------------|-----------------------|------------------|----------------|---------------------|
| | Length of Bulwark | Height of Bulwark | Size of Freeing Ports | Number each side | Area each side | Rule area each side |
| After Well | 96'-6" | 49" | 26" x 19" | 3 | 10.3 sq. ft. | |
| Forward Well | 98'-6" | 50" | 26" x 19" | 3 | 10.3 sq. ft. | |

State position of each freeing port ... After Well: 14', 44', 81' from Bridge Aft Bulkhead } 11" over deck edge.
(F. and A. position and height above deck edge) Forward Well: 14', 43', 72' }
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Shutters x 3 horizontal rails.

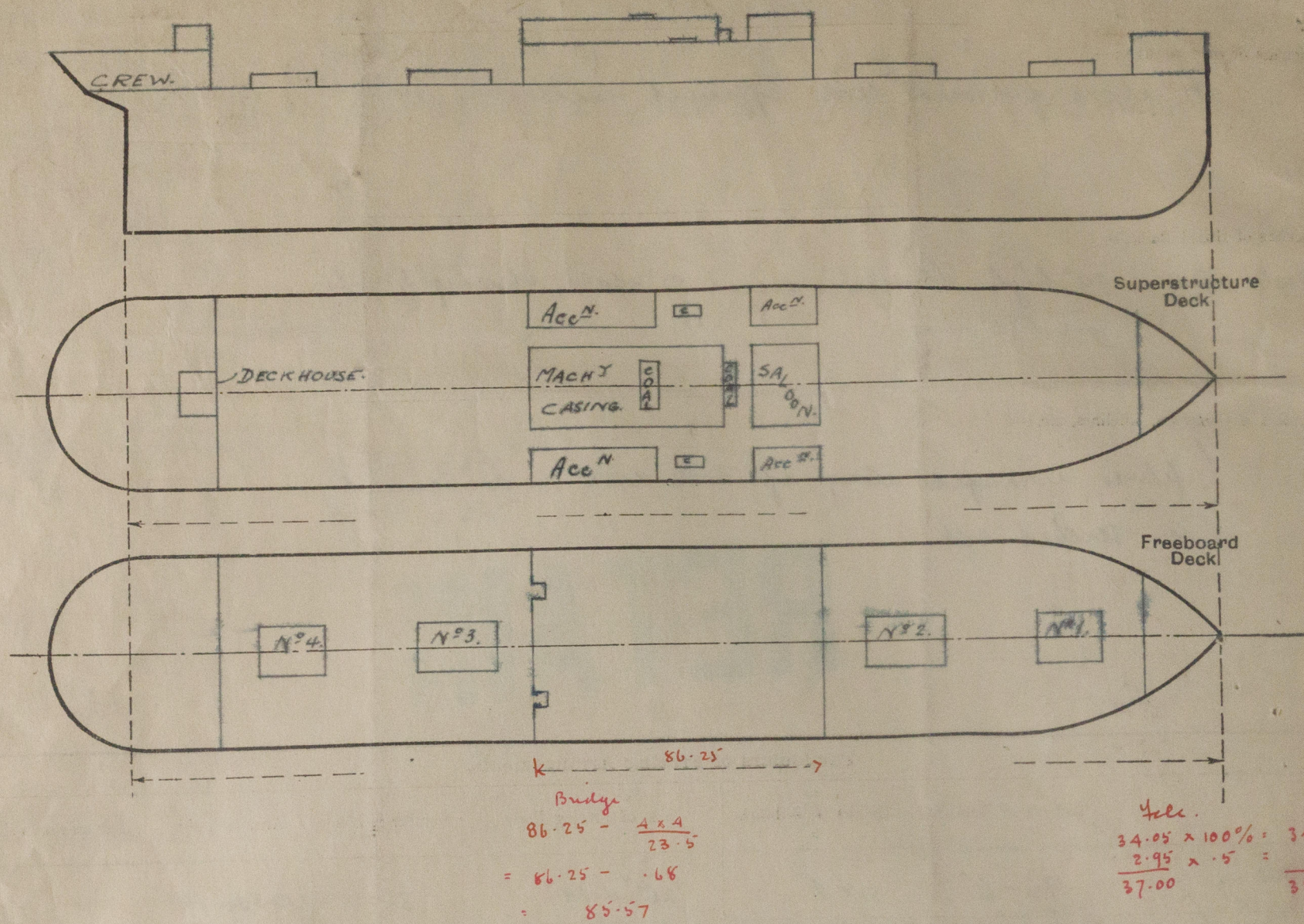
Additional area where sheer is less than standard.

| Particulars of Superstructures, Trunks, Casings, Deckhouses. | | | | | | | | |
|---|---------|---------|-----------------------|---------|-------------------------------|------------------|-----------------|-------------------|
| | Coaming | Plating | Stiffeners | Spacing | End Attachments of Stiffeners | Size of Openings | Height of Sills | Height of Casings |
| Poop Bulkhead | 24" | 28" | 5 1/2" x 3 1/2" angle | 39" | — | — | — | 7'-0" |
| Raised Quarter Deck Bulkhead | 19" | 28" | 3 1/2" x 3 1/2" angle | 36" | Bkts. Top & Bottom | 6'-9" x 3'-6" | — | 7'-6" |
| Bridge, After Bulkhead | 19" | 28" | 6" x 3 1/2" B.A. | 32" | ditto. | 28" x 50" | 24" | 7'-6" |
| Bridge, Forward Bulkhead | 24" | 40" | 6" x 3 1/2" B.A. | 36" | — | 6'-9" x 3'-2" | — | 7'-3" |
| Forecastle Bulkhead | 23" | 28" | 3" x 3" angle | 30" | — | — | — | — |
| Trunk, Aft | | | | | | | | |
| Trunk, Forward | | | | | | | | |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks | | | | | | | | |
| Exposed Machinery Casings on Superstructure Decks | 23" | 28" | 3" x 3" angle | 30" | — | 23" x 50" | 23" | 7'-0" |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | | | | | | | | |
| Deckhouses on Flush Deck Ships | | | | | | | | |

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

| | |
|---|---|
| Poop Bulkhead | No openings. |
| Raised Quarter Deck Bulkhead | |
| Bridge, After Bulkhead | 2 loose plate doors in 2 halves horizontally - for full height. Hook bolts 10" apart NO T. thro' bulkhead: shut from outside. |
| Bridge, Forward Bulkhead | 2 hinged steel doors closed from outside. Studs screwed into bulkhead 17" apart. Sogs & nuts fitted over same. |
| Forecastle Bulkhead | 1 temporary wood hinged door workable from both sides. - to workshop & store. |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks | |
| Exposed Machinery Casings on Superstructure Decks | 2 steel hinged doors to B.R. each with 1 bolt fastened from inside only. |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | 2 - E.R. - lock workable from both sides. |
| Deckhouses on Flush Deck Ships | |

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



State any special features in the construction of the ship:—

Particulars for Timber Freeboard:—

It is stated that Nº 4 D.B. Tank has a watertight centre-girder.
 Bulwarks - Fore & Aft. - Stays of 7" B. plate, spaced 68" apart. Top rail of 6" x 3" B.A.
 Sockets for uprights of 3" x 3" angles, spaced not over 10' apart.
 Holes for lashing shackles provided in each bulwark stay, near to top.
 Steering rods & chains led alongside bulwarks, protected by temporary wood casing when required.
 Emergency hand steering gear on Poop, clear of all deck cargo.

Handwritten calculations:

$22.18 \times 85\% .011$
 $.17$
 22.35
 $19.65 = 7334$
 2.70
 $\times 12 \times 34.5 = 1085$
 8419
 42
 8377

Builder's name and yard number Russell & Co. Port Glasgow. Nº 493.

Names of sister ships _____

Owners Rederi A/B Falkvik. (Th. Carlsson. Mgr.) Solvesborg.

Fee kr. 310:—

Received by me _____



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